

THE VIABILITY OF OUTCOURSE FOR HIV PREVENTION WITHIN THE PUERTO RICAN CONTEXT

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Background: As the number of HIV/AIDS cases continues to increase in Puerto Rico, outercourse, or non-penetrative sexual activities, may be one alternative for healthy sexual living for persons living with or at risk for HIV/AIDS.

Methods: Between April and August 2006, we surveyed 1138 women living in low-income housing in Ponce, PR on their attitudes toward and participation in outercourse activities.

Results: The majority of the sample were aged >25 years (80.2%), with a mean sample age of 36.77 (SD=12.31). Approximately one half (49.8%) of the women in the sample were legally married or involved in a common-law relationship. Mutual masturbation and the use of sex toys were viewed as "real sex" by only 33% and 16%, respectively, of the women surveyed. A slight majority had at least a high school education (57.5%). Of those with a steady sex partner in the previous 12 months, 47% engaged in mutual masturbation, and 17% used sex toys. Of those with a non-steady sex partner in the previous 12 months, 41% engaged in mutual masturbation, and 14% used sex toys. Logistic regressions indicated that persons who perceived mutual masturbation and the use of sex toys as real sex were more likely than those who did not perceive them to be so to engage in either or both behaviors with their most recent steady sex partner (OR=4.5, CI=3.3–6.2 and OR=18.11, CI=11.5–28.6, respectively); the same relationship emerged with their most recent non-steady sex partner (OR= 4.0, CI=1.9–8.3 and OR=15.9, CI=5.3–47.4).

Conclusions: The levels of participation in outercourse were low across the sample; also low was the perception of outercourse as being real sex. Outercourse appears to be, primarily, a precursor to penetrative sex, especially with steady sex partners. If culturally sensitive prevention messages were to promote outercourse as real sex and as an ultimate sexual goal, couples might be able to maintain an intimate, yet safe, sexual relationship. Outercourse should not be promoted as the only option for safer sex relationships but instead in the context of a comprehensive prevention message, which would also include protected sexual intercourse for those who choose to engage in penetrative activities. (*Ethn Dis.* 2010;20[Suppl 1]:S1-178–S1-184)

Key Words: Culture, Outercourse, Puerto Rico, Latina, HIV prevention

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INTRODUCTION

The prevalence rate of HIV/AIDS continues to increase in the Caribbean, being second only to that of Sub-Saharan Africa.¹ In Puerto Rico (as is the case in several Caribbean nations), a set of deeply embedded beliefs concerning cultural and traditional sex roles contribute to the epidemic. When acted out by individuals, these roles, which are determined by cultural norms, influence and, when appropriate, sanction all aspects of sexual activity,^{2,3} including the type, intensity, duration and frequency.

Puerto Rican children born into families in which these cultural standards are upheld and advanced are witness to attitudes, mores, and customs that espouse very strong gender differences. Because these gender differences are inculcated in the children from the moment of birth, they later come to saturate every facet of sexual expression, every aspect of male-female interaction.⁴ It should be noted that far from being unique to Puerto Rico, this kind of behavior is common in many Latin societies.⁵

Boys and men who are exposed to such behavior over a long period of time commonly develop the attitude known as *machismo*, which is the belief that males are physically, intellectually, culturally, and sexually superior to females.⁴ In societies where machismo is promoted, the traditional sex roles mentioned above are apt to be prevalent, as evidenced by the tendency of the

male individuals within the population to dominate when it comes to sexual activity and decision-making. And, in machismo-based societies, males (especially adolescents and young adults) are encouraged to engage in high levels of sexual activity and to seek multiple sex partners. For those who embrace the machismo attitude, women become no more than sex objects whose sole purpose in life is the fulfillment of men's desires and needs.⁶

In Puerto Rico, where the ideas propounded under the banner of machismo are ubiquitous among the members of the low-income population, these members tend to hold to more traditional values when it comes to gender roles⁷; it is this population that is hardest hit by the AIDS epidemic.

One area of sexual activity that has received little attention within the Puerto Rican context is outercourse, which refers to sexual activity that does not involve either penile penetration or the exchange of body fluids (ie, no vaginal, anal, or oral sex).⁸ As the number of HIV/AIDS cases continues to increase in Puerto Rico,⁹ outercourse may be one alternative for persons living with or at risk of HIV. Only one study (not conducted in Puerto Rico) was identified that examined the role of outercourse in the context of HIV prevention. Students from the University of West Indies were surveyed about their attitudes toward outercourse and their engagement in this activity with their most recent steady and/or non-steady sex partners.¹⁰ Results indicated that those who viewed outercourse as being real sex were much more likely to engage in it with their sex partners. However, the majority of students usually or always followed outercourse with penetrative sex (more than 75%), negating the role of outercourse as a

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viable option to penetrative sex for the purpose of HIV prevention.

Because the relationships between attitudes and non-traditional sexual activities, such as outercourse, have been little studied, the current investigation will attempt to better understand the role of outercourse within the sexual repertoire of Puerto Rican women living in public housing. Therefore, our study proposed two exploratory hypotheses:

Hypothesis 1: The perception of mutual masturbation and the use of sex toys as real sex will vary by demographic characteristics, in that younger persons, persons in unstable relationships, those with lower levels of education, and those who attend religious services frequently will be less likely to hold that view.¹⁰

Hypothesis 2: Persons who perceive mutual masturbation and the use of sex toys as being real sex will be more likely to engage in the activity.¹⁰

METHODS

Data Collection

Data for these analyses were taken from the *Proyecto MUCHAS*, an HIV risk-reduction project targeting women living in public housing in Ponce, Puerto Rico (<http://www.psm.edu/research/MUCHAS>). A 219-item questionnaire was developed related to HIV/AIDS education and prevention. The questionnaire was based upon social-psychological theories of behavior change, including the Health Belief Model, Theory of Reasoned Action, and Social Cognitive Theory.¹¹⁻¹³ Theoretical variables drawn from these theories included perceived risk, perception of norms, and self-efficacy with respect to condom use. In addition, instruments from other Caribbean studies and from the Centers for Disease Control and Prevention (CDC) were used to facilitate the development and inclusion of standard questions that have been found to employ reliable

and valid measures of HIV-related attitudes and behaviors across various samples.^{14,15} Our survey instrument was reviewed and approved by the institutional review board, Ponce School of Medicine, and included items addressing knowledge of transmission, knowledge of risks associated with specific sexual behaviors, attitudes toward persons living with HIV/AIDS, HIV-testing behaviors, sexual history, attitudes toward condoms and safer sex, sexual behaviors by steady and non-steady sex partners, and drug and alcohol use.

The instrument was piloted with a sample of 30 women in order to assess the ease of its completion, to determine whether the questions were easily understood, and to ensure that the instrument could be completed in a timely fashion. On the basis of the first piloting phase, revisions were made, and the instrument was piloted again with 10 women during a focus group session. Following the results of the focus group discussion regarding the survey instrument, minor revisions were made, and the instrument was finalized. Women completed the assessments in the community center room within each housing development. Informed consent was received from every respondent. Due to the nature of the questions and the possible perceived threat of addressing issues of a sexual nature, the instrument was self-administered with no identifiers, providing anonymity to the respondents. However, research assistants provided support for those women who were unable to read the questionnaire (or who needed other assistance) by reading the survey to them and/or completing the survey on their behalf. Each woman received \$10 as compensation for completing the survey.

A non-probability sample was employed for the study; all eligible women were invited to participate. Eligibility criteria included being female and a resident of the public housing development. Data were gathered between April

and August 2006 from 1138 women in 23 public housing developments across the city of Ponce.

Variables

Attitudes toward mutual masturbation

Women were asked whether they considered mutual masturbation to be "real sex." The term "real sex" was not defined for the respondents. Instead, it was left up to the respondents to decide what "real sex" meant to them personally. Responses were dichotomized into yes (1) and no/don't know (0).

Attitudes toward the use of sex toys

Women were asked whether they considered the use of sex toys as being "real sex." Responses were dichotomized into yes (1) and no/don't know (0).

Engaging in mutual masturbation with most recent steady sex partner

Women were asked whether they had engaged in mutual masturbation with their most recent steady sex partners. Responses were categorized as yes (1) and no (0).

Using sex toys with most recent steady sex partner

Women were asked whether they had used sex toys with their most recent steady sex partners. Responses were categorized as yes (1) and no (0).

Engaging in mutual masturbation with most recent non-steady sex partner

Women were asked whether they had engaged in mutual masturbation with their most recent non-steady sex partners. Responses were categorized as yes (1) and no (0).

Using sex toys with most recent non-steady sex partner

Women were asked whether they had used sex toys with their most recent non-steady sex partners. Responses were categorized as yes (1) and no (0).

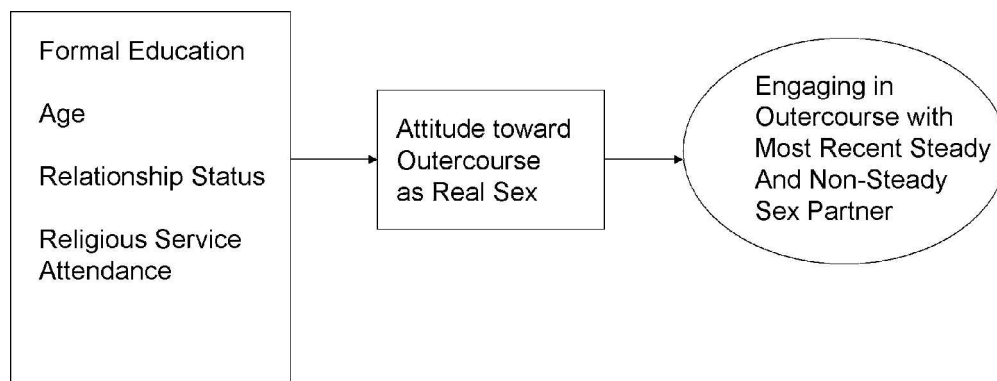


Fig 1. Conceptual model

Relationship status

Those who reported being legally married or in a common-law relationship were coded as being married (1) while remaining women (boyfriends, separated, divorced or widowed, or uninvolved at the time of interview) were coded as being unmarried (0).

Religious service attendance

Participants were asked how often they attend religious services during the month prior to the interview. Response categories included never, once, 2–3 times, once a week, and, more than once a week. Responses were combined into three categories, with those attending once a week or more being coded as frequent attendees (1) and women reporting attending services, but less than once a week, were coded as infrequent attendees (2); while the remaining women were coded as never attending (3).

Age

Women were asked to report their age in years. A dichotomous variable was created: those who reported being aged ≥25 years were coded as adult (0), while those aged <25 years were coded as youth (1), a categorization based on the World Health Organization’s (WHO) definition of youth (WHO 2000).

Formal education

Women were asked to what level of school they had completed. Those who

reported completing high school or greater were coded as having at least a high school education (1), while remaining women were coded as having less than high school education (0).

Data Analysis

Chi-squared and binary hierarchical logistic regression analyses were employed to examine the relationships among the model variables. This type of regression analysis takes an iterative form; an initial simple model is followed by more complex models in which the dependent variable from the immediately preceding model becomes a predictor along with the previous predictors.¹⁷ All model variables have been dichotomized or trichotomized to facilitate the logistic regression analyses. Figure 1 illustrates the conceptual model.

RESULTS

Sample Characteristics

The majority of the sample was aged >25 years (80.2%), with a mean sample age of 36.77 (SD=12.31). Approximately one half (49.8%) were legally married or involved in a common-law relationship. A slight majority had at least a high school education (57.5%), while most were unemployed (88.6%). Slightly less than one quarter (23.4%) attended religious services at least weekly. Overall, only one third of the sample

(33.1%) perceived mutual masturbation as “real sex,” while a lesser percentage (16.1%) perceived the use of sex toys as “real sex.” Among women who reported having a steady partner in the previous 12 months, almost half (46.6%) reported engaging in mutual masturbation. However, only a minority (17.1%) of the same women reported using sex toys with this partner. Among women who reported having a non-steady sex partner in the previous 12 months, slightly fewer (than those with steady partners) reported engaging in mutual masturbation with this partner (40.5%); a small percentage (13.8%) reported the use of sex toys. Among those who engaged in mutual masturbation with their most recent steady sex partner, slightly less than half reported seldom or never engaging in penetrative sex following the activity (45.6%); for those who used sex toys, the percentage was smaller (37.9%). Among those who engaged in mutual masturbation with their most recent non-steady sex partner, the majority reported never or seldom following the activity with penetrative sex (64.7%); for those who used sex toys, the percentage was slightly higher (66.7%).

Bivariate Results

Table 1 presents the frequency and percentage distributions of selected demographics, and the belief as to whether mutual masturbation and the

Table 1. Frequency and percentage distributions of perceptions of mutual masturbation and the use of sex toys as “real sex” by selected demographics

	Perception of Mutual Masturbation as being “Real Sex”		χ^2 (P value)	Perception of the Use of Sex Toys as being “Real Sex”		χ^2 (P value)
	Yes	No/Don’t Know		Yes	No/Don’t Know	
Total	353/1065 (33.1%)	712/1065 (66.9%)		170/1054 (16.1%)	884/1054 (83.9%)	
Age group			.571 (P=.450)			2.00 (P=.158)
Youth	64/210 (30.5%)	146/210 (66.8%)		40/209 (19.1%)	169/209 (80.9%)	
Adult	277/834 (33.2%)	577/834 (69.5%)		125/826 (15.1%)	701/826 (84.9%)	
Relationship status			1.41 (P=.235)			.459 (P=.498)
Stable	188/540 (34.8%)	352/540 (65.2%)		89/531 (16.8%)	442/531 (83.2%)	
Unstable	159/507 (31.4%)	348/507 (68.6%)		77/506 (15.2%)	429/506 (84.8%)	
Education			3.99 (P=.046)			7.69 (P=.006)
Less than HS	126/427 (29.5%)	301/427 (70.5%)		50/416 (12.0%)	366/416 (88.0%)	
HS or more	211/595 (35.5%)	384/595 (64.5%)		110/595 (18.5%)	485/595 (81.5%)	
Frequency of Religious service Attendance			.009 (P=.996)			.953 (P=.621)
At least weekly	83/247 (33.6%)	164/247 (66.4%)		36/248 (14.5%)	212/248 (85.5%)	
At least monthly	141/423 (33.3%)	282/423 (66.7%)		66/414 (15.9%)	348/441 (84.1%)	
Never	123/370 (33.2%)	247/370 (66.8%)		64/367 (17.4%)	303/367 (82.6%)	

use of sex toys can be considered “real sex.” Those with less than a high school education were significantly less likely to view either activity as real sex (29.5% vs 35.5%, $P < .05$ and 12.0% vs 18.5%, $P < .01$, respectively. There were no significant differences between the age groups, relationship status, or frequency of attending religious services.

Multivariate Results

Table 2 presents the hierarchical regression analyses results and contains six sub-models. All six sub-models were statistically significant (1a–1b, 2a–2b, 3a–3b). In sub-model 1a, where the perception of mutual masturbation as being real sex is the dependent variable, only one independent variable emerged as statistically significant in the final overall model. Those with at least a high school education were more likely to perceive mutual masturbation as being real sex than were those women with less education (odds ratio [OR]=1.32, 95% confidence interval [CI]=1.01–1.72). In sub-model 1b, where perception of using sex toys as being real sex is the dependent variable, the same independent variable emerged as statistically significant in the final model. Women

with at least a high school education were more likely to perceive this activity as being real sex than were less educated women (OR=1.66, CI=1.16–2.38).

In sub-model 2a, where engaging in mutual masturbation with most recent steady sex partner was the dependent variable, three of the five independent variables emerged as statistically significant in the final model. Those women who were more educated and younger were more likely to engage in this activity than were those women with less education and who were older (OR=1.85, CI=1.36–2.52 and OR=1.47, CI=1.02–2.10, respectively). Lastly, those women who perceived mutual masturbation to be real sex were much more likely to report engaging in the activity with their most recent steady sex partner than were those women who did not hold this attitude (OR=4.52, CI=3.29–6.24). In sub-model 2b, where using sex toys with most recent sex partner was the dependent variable, the same relationships emerged as in the previous sub-model. Those women who were more educated and who were younger were more likely to engage in this activity than were those women with less education and who were older

(OR=1.72, CI=1.06–2.77 and OR=1.69, CI=1.02–2.79, respectively). Also, those who held the attitude that using sex toys is real sex were far more likely to report using them with this partner than were women who did not hold this attitude (OR=18.11, CI=11.48–28.55). It is important to note there that these extremely small and large odds ratios and confidence intervals are a result of one or more small cells between the independent variable and dependent variable, after controlling for the remaining variables. However, since the P value is $< .05$ and the confidence intervals do not include one, this would suggest that these variables are important. In such cases, it is most appropriate to use the lower limit of the confidence interval in describing the relationship.

In sub-model 3a, where engaging in mutual masturbation with most recent non-steady partner was the dependent variable, only two independent variables emerged as statistically significant. Those women who had at least a high-school education were more likely to report engaging in this activity than were those with less education (OR=2.28, CI=1.12–4.65). Also,

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Table 2. Hierarchical regression analyses results

Model and Independent Variables	Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI)!	Final Adjusted Odds Ratio (95% CI)\$
Sub-Model 1a: Perception of mutual masturbation as real sex (n=966)			
Education	1.31 (1.01–1.72)*	1.29 (0.98–1.71)+	1.32 (1.01–1.72)*
Age	0.88 (0.64–1.22)	0.84 (0.59–1.19)	–
Relationship status	1.17 (0.90–1.51)	1.17 (0.89–1.53)	–
Religious service attendance			–
Never	0.98 (0.70–1.38)	1.01 (0.89–1.53)	–
Least monthly	0.99 (0.71–1.38)	1.05 (0.98–1.71)	–
Sub-Model 1b: Perception of using sex toys as real sex (n=957)			
Education	1.66 (1.16–2.38)**	1.60 (1.10–2.33)*	1.66 (1.16–2.38)**
Age	1.33 (0.90–1.97)	1.21 (0.79–1.87)	–
Relationship status	1.12 (0.80–1.57)	1.11 (0.78–1.57)	–
Religious service attendance			–
Never	1.24 (0.80–1.94)	1.09 (0.68–1.75)	–
Least monthly	1.12 (0.72–1.74)	1.08 (0.68–1.71)	–
Sub-Model 2a: Engage in mutual masturbation with most recent steady partner (n=765)			
Education	1.86 (1.40–2.48)***	1.92 (1.40–2.63)***	1.85 (1.36–2.52)***
Age	1.33 (0.96–1.84)+	1.52 (1.04–2.21)*	1.47 (1.02–2.10)*
Relationship status	1.33 (1.01–1.75)*	1.45 (1.06–1.99)*	–
Religious service attendance			–
Never	1.19 (0.83–1.71)	1.35 (0.89–2.05)	–
Least monthly	1.33 (0.93–1.89)	1.44 (0.96–2.16)	–
Attitude toward mutual Masturbation as real sex	4.36 (3.22–5.91)***	4.46 (3.22–6.18)***	4.52 (3.29–6.24)***
Sub-Model 2b: Use sex toys with most recent steady partner (n=765)			
Education	2.03 (1.36–3.04)**	1.83 (1.12–2.98)*	1.72 (1.06–2.77)*
Age	1.56 (1.04–2.33)*	1.72 (1.02–2.89)*	1.69 (1.02–2.79)*
Relationship status	1.25 (0.87–1.81)	1.49 (0.93–2.38)+	–
Religious service attendance			–
Never	1.08 (0.66–1.76)	1.20 (0.69–2.22)	–
Least monthly	1.20 (0.75–1.94)	1.18 (0.65–2.15)	–
Attitude toward sex toy use as real sex	17.26 (11.23–26.52)***	18.47(11.12–29.42)***	18.11 (11.48–28.55)***
Sub-Model 3a: Sub-Model 2a: Engage in mutual masturbation with most recent non-steady partner (n=137)			
Education	1.97 (1.03–3.79)*	2.59 (1.20–5.58)*	2.28 (1.12–4.65)*
Age	1.05 (0.52–2.13)	1.03 (0.45–2.34)	–
Relationship status	0.80 (0.40–1.60)	0.94 (0.42–2.12)	–
Religious service attendance			–
Never	0.43 (0.16–1.14)+	0.50 (0.16–1.54)	–
Least monthly	0.50 (0.19–1.30)	0.78 (0.26–2.37)	–
Attitude toward mutual masturbation as real sex	4.22 (2.10–8.51)***	4.20 (1.91–9.22)***	4.01 (1.94–8.31)***
Sub-Model 3b: Use sex toys with most recent non-steady partner (n=132)			
Education	1.53 (0.60–3.99)	1.11 (0.33–3.74)	–
Age	2.63 (1.04–6.66)*	3.49 (0.95–12.79)+	2.80 (0.92–8.54)+
Relationship status	0.63 (0.22–1.82)	0.26 (0.06–1.17)+	–
Religious service attendance			–
Never	0.54 (0.14–2.07)	0.24 (0.04–1.41)	–
Least monthly	0.80 (0.22–2.88)	0.31 (0.05–1.87)	–
Attitude toward sex toy use as real sex	14.00 (4.91–39.91)***	20.29 (5.46–75.03)***	15.89 (5.32–47.42)***

Note: The comparison group for each variable is as follows: education (at least high school education); age (youths ≤ 25 years); relationship status (married/common-law); religious service attendance (weekly or more); attitude toward mutual masturbation as real sex (yes); attitudes toward sex toys as real sex (yes); engage in mutual masturbation (yes); and, use sex toys (yes).

! Adjusted for remaining independent variables in the model.

\$ Variables not significant in the adjusted model were removed one by one until only significant variables emerged.

– Denotes that variable was dropped from the final adjusted model.

+ $P < .10$.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

those women who perceived mutual masturbation to be real sex were much more likely to report engaging in the activity with their most recent steady sex partner than were those women who did not hold this attitude (OR=4.01, CI=1.94–8.31). In sub-model 3b, where using sex toys with most recent non-steady sex partner was the dependent variable, only one variable emerged as statistically significant. Those who held the attitude that using sex toys is real sex were much more likely to report using them than were those women who did not hold this attitude (OR=15.89, CI=5.32–47.42). Younger women were marginally more likely to report engaging in this activity than were older women (OR=2.80, CI=0.92–8.54).

DISCUSSION

It is notable that only one third of the sample viewed mutual masturbation as being real sex, and that even fewer of the respondents viewed the use of sex toys as being real sex. These attitudes were more prevalent among the less-educated women in the sample. In addition, the attitudes of these women may reflect particular cultural constructions of what constitutes “genuine” sex. It would also appear that non-coital activities fall under the rubric of foreplay, that is, preparation for penetrative sex, especially with steady sex partners, since the majority of persons surveyed who engaged in mutual masturbation or used sex toys with these partners always followed these activities with penetrative sex. These findings are supported by previous research that was conducted on women in New York who had been sexually active in the three months prior to the study and had engaged exclusively in outercourse. The majority of the women surveyed were of the opinion that outercourse did not replace penetrative sex, instead viewing it as an additional activity. However, after participating in a gender-specific,

HIV/STD risk reduction randomized clinical trial, women in the experimental groups (8-session condition) reported during the previous month at one-month follow-up had a greater odds of first-time use of an alternative protective strategy, including outercourse.¹⁶ While the findings were not presented by partner-type, what remains promising is that they indicate that interventions can successfully help women adopt outercourse as an option for safer sex. However, the concept of “genuine” sex may not be an important aspect to a given relationship among those engaging in sex with non-steady sex partners, since the majority of the women who engaged in outercourse activities with these partners reported seldom or never following with penetrative sex.

It is important to note that the acceptance of outercourse as real sex was a predictor of engaging in it with both steady and non-steady sex partners. This suggests that by convincing individuals that outercourse is “real sex,” the likelihood of this activity being adopted as a regular practice increases. This is especially important when a non-steady sex partner is involved, as the risk for HIV may be considerably greater than it would be with a steady sex partner.

Penetrative sex is an important aspect for many men and women; as such, non-penetrative sexual activities may be welcomed by only a few.¹⁷ Further, a culture of masculinity may also be in play here. It is possible that some women perceive non-penetrative sexual activities as not being masculine. Puerto Ricans, as is the case for many persons living in the Caribbean, are heavily influenced by traditional roles of masculinity and femininity. If outercourse is going to be promoted as a “safer sex” activity or as an alternative to penetrative sex, it will be important to address the sexual values, beliefs, and practices that are predominant within the Puerto Rican context.¹⁸ In addition, prevention messages and interventions must consider the importance of cul-

tural values and attitudes associated with outercourse for both men and women. Determining and targeting important potential motivations for engaging in outercourse within the cultural context is needed.¹⁹

With the rising number of HIV/AIDS cases, both in the Caribbean and globally, the promotion of outercourse could potentially have significant implications for HIV prevention efforts. A next step in this study could be to explicitly identify the specific cultural meanings that are tied to specific sexual activities in Puerto Rico and examine the relationships between them. More research is needed to understand the cultural significance of these non-penetrative activities and how intervention messages should be developed to move persons into accepting outercourse as a safer sex alternative, an alternative that can be both physically and emotionally fulfilling. However, outercourse should not be promoted as the only option for safer sex relationships, but in the context of a comprehensive prevention message, including protected sexual intercourse for those who choose to engage in penetrative activities.

While this study has provided insight on the sexual practices and cultural constructions surrounding different types of sexual activity in Puerto Rico, it is important to note the study limitations. These include non-probability sampling that may limit the generalizability of the results and the limited reliability of self-reported data.

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